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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,485	06/18/2001	Ullrich Sakowsky	927-076US (09685 US)	1196

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EXAMINER	
DEJESUS, LYDIA M	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/883,485	SAKOWSKY ET AL.	
	Examiner	Art Unit	
	Lydia M. De Jesús	2859	

-- The MAILING DATE of this communication appears on th cov r sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *11-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 June 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed October 16, 2003 has been placed of record and the references cited therein have been considered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the conductor tracks on which the temperature sensor is mounted must be clearly shown or the feature(s) canceled from the claim(s). In this case, Applicant has presented arguments directed to the terms "strip conductor" and "conductor track", stating that said terms implies a generally flattened, two dimensional surface, but the drawings fail show said contour. Also, the use of a paste to mount the temperature sensor onto the tube is not illustrated in the drawings. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Applicant should clearly set forth in the Specification that the term "conductive track" is an alternate term for "conductor strip" based upon the term "Leiterbahn" used in the foreign

priority document, as set forth in Applicants remarks on Paper No. 15, to thereby clarify that the use of this term does not set forth new matter in the application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1- 4, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB979616 [hereinafter Honeywell] in view of Wienand [U.S. Patent 5,037,488] Schronberger [U.S. Patent 6,077,228].

Honeywell discloses a temperature measuring device for measuring the temperature of a fluid flowing in a tube, comprising an electric temperature sensor [thermocouple junction formed by 34 and 35] securely attached to an outer side of a central tube section [26] by soldering (see lines 20-29 of Page 2) so as not to shift radially or axially, the temperature sensor being outwardly protected by a hollow housing/jacket [40] that surrounds the tube section with a

spacing therefrom, and a connection cable [36] electrically and mechanically affixed to the temperature sensor and guided through an opening of the housing, as shown in Figure 1, wherein the temperature sensor is mounted on leads [30, 28]on the outer side of the tube section. Said temperature sensor is connected to an end of the connection cable [36] via the strip conductors [30,28] mounted along the tube section. Said tube section provided with the temperature sensor is positioned axially in the housing using two spaced apart rings/end walls [60,62]. Said temperature sensor is a surface mountable sensor, in this case a thermocouple.

Honeywell fails to disclose said sensor being mounted on conductive tracks on the outer side of the tube using a thermally and electrically good-conducting paste.

However, Wienand teaches that the use of conductive tracks [2,3] for coupling a temperature sensor [11] is very well known in the art. In this case, Wienand teaches that this arrangement allows for a flexible structure which is less likely to resonate under the influence of vibrations.

Furthermore, Schroberger teaches the use of a thermally and conductive epoxy [62] to hold and electrically connect a temperature sensor to a conductor.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the temperature sensor configuration of the apparatus disclosed by Honeywell for a temperature sensor mounted onto conductive tracks on the outer side of the tube, as taught Wienand, and further using an thermally and electrically conductive paste to couple the sensor to the conductive tracks, as taught by Schroberger, since the resulting temperature sensor configuration will perform the same function of generating a signal

representative of the measured temperature while providing a stronger mounting arrangement that is less likely to be affected by vibrations.

With respect to the limitations of claims 6 and 11: These limitations, although proper, are insufficient to patentably distinguish the claimed temperature measuring device from the prior art because they are not directed to limitations of the measuring device but to particular features of the object from which temperature is to be measured. In this case, Honeywell does disclose the use of the temperature measuring device for measuring the temperature of fluid in a tube and hence, it is considered that the particular material of the tube and the structures connected to the ends of the tube section on which the measuring device is provided do not serve to further limit the structure of the temperature measuring device itself.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honeywell in view of Wienand and Schroberger as applied to claims 1-4, 6 and 11 above, and further in view of Tamai et al. [hereinafter Tamai].

Honeywell, Wienand and Schroberger together disclose a temperature measuring device as claimed, as stated above in paragraph 6, but fail to disclose said electric temperature sensor being a platinum thin film resistor.

However, Tamai teaches that thermistors, thermocouples and platinum resistors are among the temperature sensing elements commonly selected for fluid temperature measurements.

Therefore, at the time the invention was made, one of ordinary skill in the art would consider a choice of design the selection of a platinum thin film resistor as the electric temperature sensor in the measuring device of the combination of Honeywell, Wienand and

Schroberger since, as taught by Tamai, it is among the sensing elements commonly used for performing fluid temperature measurements.

8. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honeywell in view of Wienand and Schroberger as applied to claims 1-4, 6 and 11 above, and further in view of Stulen et al. [hereinafter Stulen].

Honeywell, Wienand and Schroberger together disclose a temperature measuring device as claimed, as stated above in paragraph 6, but fail to disclose said housing comprising two semi-cylindrical constructed parts connected to each other via a flexible foil hinge having a pivot axis which runs parallel to an axis of the tube section and wherein, diametrically opposed the foil hinge, a sealing device is provided, formed by at least one hook on the first housing part that catches in a recess of an opposing housing part and wherein the connection cable at its end seen in axial direction is clamped in form-fitting manner along a separation line of the two housing parts between the two hooks.

Stulen shows an apparatus for measuring physical characteristics in a pipeline, including temperature sensors enclosed in a cylindrical housing and, during operation, placed in contact with the pipeline. Said housing is a sheath-shaped housing comprising two cylindrical constructed parts [38] connected by a hinge, as shown in Figure 2, and provided with a sealing device formed by a pair of hooks that catch in a pair of recesses/groves on an opposing housing part.

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to modify the configuration of the housing of the measuring device disclosed by Honeywell, Wienand and Schroberger, to comprise two semi cylindrical parts

connected to each other via a hinge and provided with a sealing device, as taught by Stulen, in order to facilitate installation and removal of the measuring device.

Furthermore, Honeywell already shows an opening in the housing of the measuring device for the connection cable [36] and Stulen teaches the use of a housing structure as claimed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select as the particular position of the opening for the connection cable of the measuring device of the combination of Honeywell, Peel and Stulen a position along a separation line of the two housing parts between the two hooks of the housing instead of on the outer surface of the housing adjacent one end, as shown by Honeywell, since this is not considered to alter the operation of the measuring device and the courts have held that there is no invention in shifting the position of a structure to a different position if the operation of the device would not be thereby modified. In re Japikse, 86 USPQ 70 (CCPA 1950).

Response to Arguments

9. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lydia M. De Jesús whose telephone number is (703) 306-5982. The examiner can normally be reached on 7:30 to 4:00 p.m., Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (703) 308-3875. The fax phone numbers for

the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Diego F.F. Gutierrez
Supervisory Patent Examiner
Technology Center 2800

LDJ
January 8, 2004